Phylogeny of selected genera of geckos in the Mediterranean and adjacent regions

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Ph.D. thesis

Abstract

This Ph.D. thesis is composed of three published articles and one manuscript, and is focused on the phylogenetic relationships of selected species of geckos from the Mediterranean and surrounding areas. The group of geckos of interest shares the common characteristic of an absence of adhesive lamellas on their toes. Historically, it was assumed that these species were closely related. Molecular-phylogenetic approaches were used in order to reveal the phylogenetic relationships within this group, especially using the sequential data from mitochondrial genes. Morphological characteristics commonly used in lizards were studied in connection with the ecology of the group. This thesis provides the first more detailed view of the phylogeny of the studied species. The results show that the genus *Cyrtopodion*, previously considered as monophyletic, in fact is not monophyletic as the genera *Bunopus* and *Agamura* represent its inner groups. *Mediodactylus*, the subgenus of *Cyrtopodion*, forms monophylum but is not closely related to the other members of the genus and so was reclassified as the independent genus. The enigmatic and yet so far very poorly studied genus *Carinatogecko* was discovered to be the inner group of the genus *Mediodactylus.* The recently described species *Cyrtopodion dehakroense* was therefore transferred to the genus *Mediodactylus* based on ecological and morphological data. Phylogenetic analysis of sequence data enhanced by ecological niche modelling supported the specific status of the two recognized subspecies of *Bunopus spatalurus*.